

# BookletChart™

## Beaver Bay to Pigeon Point

NOAA Chart 14967

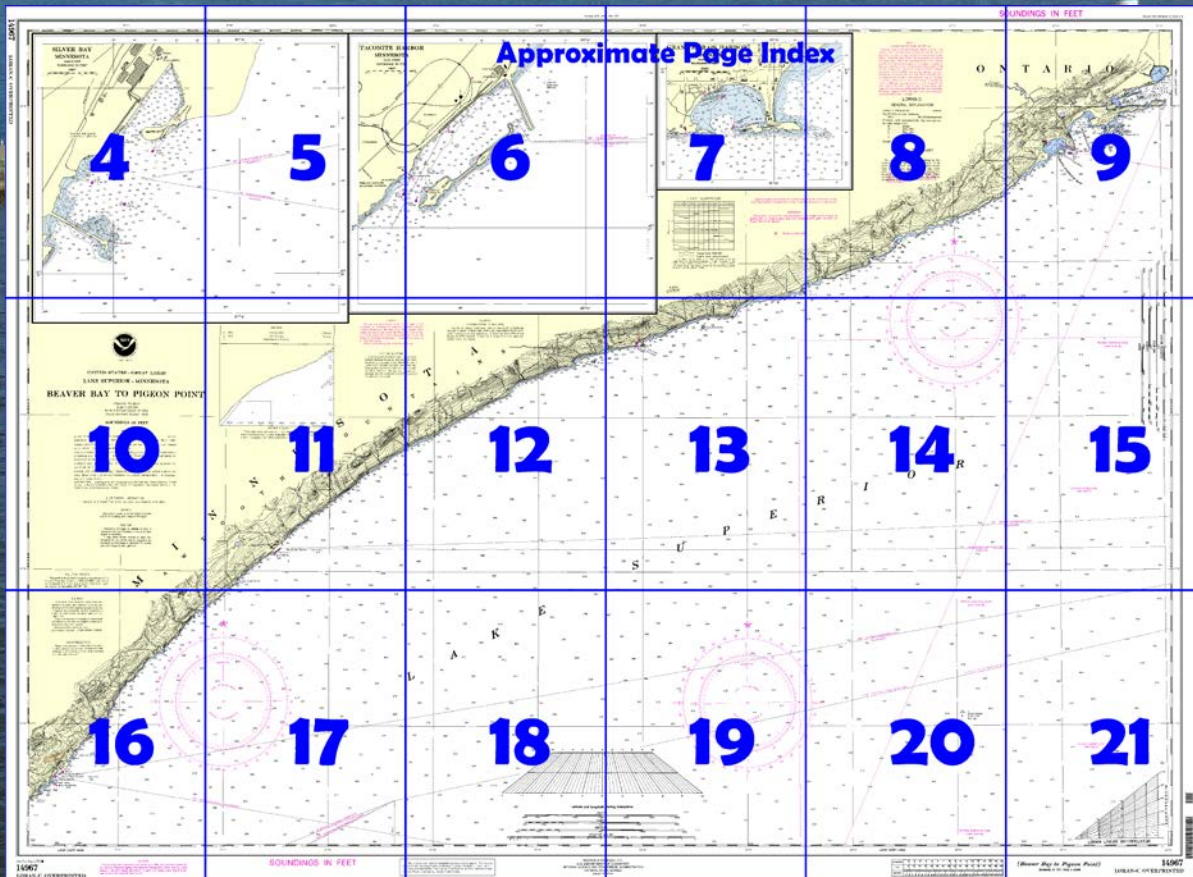


*A reduced-scale NOAA nautical chart for small boaters*

*When possible, use the full-size NOAA chart for navigation.*



- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



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**National Oceanic and Atmospheric Administration**  
**National Ocean Service**  
**Office of Coast Survey**  
[www.NauticalCharts.NOAA.gov](http://www.NauticalCharts.NOAA.gov)  
**888-990-NOAA**

### What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

### What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

### Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at <http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=14967>.



#### (Selected Excerpts from Coast Pilot)

**Beaver Bay**, about 50 miles northeast of Duluth Ship Canal, is about 0.7 mile wide and indents the shore about 0.3 mile. The 16-foot depth contour is within 30 to 200 feet of shore. Large boulders are in all parts of the bay. The shore of the bay is bordered by bluffs that rise 75 to 200 feet above the lake. The bay affords some shelter from south, west, and north storms, but is open and unprotected to northeast, east, and southeast. The most

dangerous storms at this end of the lake are from northeast, the seas having a fetch of more than 250 miles. Two piers are on the north side of the bay. The east pier has a depth of 5 feet at the outer end, and the

West pier 9 feet at the outer end.

**Silver Bay Harbor** is a private harbor developed by a mining company about 52 miles northeast of Duluth Ship Canal. The stacks on the powerhouse just north of the harbor are prominent. The harbor is about 1 mile long and 0.25 mile wide with depths of at least 30 feet over most of its area. The harbor is protected from the east and northeast by **Beaver Island** and from the southwest by **Pellet Island**, connected to the shore by a breakwater. Private lights mark both Beaver and Pellet Islands; a private sound signal is at the light on Beaver Island. Lighted buoys mark the limit of deep water in Silver Bay and a private light is on the outer end of the wharf. In 2008, a shoal was reported to be encroaching on the entrance to the harbor from the west end of Beaver Island decreasing the available width of the entrance to about 150 feet; a buoy marks the edge of the shoal.

**Wharf.**—Silver Bay has one deep-draft wharf on the northwest side of the harbor. (For a complete description of the port facilities, refer to Port Series No. 49, published and sold by the U.S. Army Corps of Engineers. See Appendix A for address.) The alongside depths given for this facility are reported depths. (For information on the latest depths, contact the operator.)

**Northshore Mining Co. Dock:** 2,775 feet of berthing space; 30 feet alongside; deck height, 8½ feet; shipment of iron ore pellets and receipt of coal; occasional receipt of steel.

From Silver Bay Harbor the shore extends northeast for about 23 miles to Taconite Harbor. The shore is bold and rocky, with cliffs and steep slopes. Numerous small points and inlets afford limited shelter. There are no outlying obstructions, and the shore can be approached within 0.5 mile. **Baptism River**, 5 miles northeast of Silver Bay Harbor, is the largest stream flowing into this stretch, and the area around its mouth is a State park. A lighted radio mast about 4 miles northeast of Silver Bay Harbor near the summit of **Palisade Head** is prominent.

**Local magnetic disturbance.**—Differences from normal variation of from 004°W to 006°W have been observed in the vicinity of Baptism River and Palisade Head.

**Taconite Harbor** is a private harbor maintained by the Minnesota Power Company and Cleveland-Cliffs Inc., about 75 miles northeast of Duluth at the mouth of **Two Island River**. The harbor is a basin, about 0.8 mile long and 0.3 mile wide, enclosed by **Gull Island**, **Bear Island**, and a series of breakwaters. Three lighted stacks at the powerhouse at the north end of the harbor are prominent.

Gull Island, Bear Island, the breakwater between them, and the breakwater that extends northeast from Bear Island protect the harbor from the southeast. A breakwater that extends southeast from shore at the north end of the harbor protects the harbor from the NE. The harbor is entered north from Lake Superior on the west side of Gull Island and is exited between the breakwaters at the northeast end of the harbor. The entrance to the harbor is marked by lighted buoys, lights, and a **028°** lighted range. Shoals are at the north end of the harbor and off the end of the breakwater on the south side of the harbor exit. All the aids in the harbor are private.

In 1972, the controlling depths were 27 feet in the entrance channel, 27 feet along the face of the dock on the northwest side of the harbor, and 29 feet in the exit channel. Depths inside the harbor range from 27 feet to over 50 feet.

**Caution.**—In 1975, an anchor was lost in the entrance channel, about 600 feet north of the light on the east side of the entrance.


### U.S. Coast Guard Rescue Coordination Center 24 hour Regional Contact for Emergencies

RCC Cleveland

Commander  
9th CG District  
Cleveland, OH

(216) 902-6117

# Table of Selected Chart Notes

 Pump-out facilities

Fixed and floating aids are privately

Fixed and floating aids are privately maintained

## CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

During some winter months or when endangered by ice, certain aids to navigation are replaced by other types or removed. For details see U.S. Coast Guard Light List.

Polyconic Projection  
Scale 1:120,000

North American Datum of 1983  
(World Geodetic System 1984)

SOUNDINGS IN FEET

## RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

## CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

## CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117.

Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:

○ (Accurate location)    ◐ (Approximate location)

## NOTE B

Mariners should use caution as military craft may be operating within the area. For further information consult the U.S. Coast Guard Local Notice to Mariners.

## HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1902 must be corrected an average of 0.543" southward and 0.746" westward to agree with this chart.

## POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

Low Water Datum, which is the plane of reference for the levels shown on the above hydrograph, is also the plane of reference for the charted depths. If the lake level is above or below Low Water Datum, the existing depths are correspondingly greater or lesser than the charted depths.

## LORAN-C

### GENERAL EXPLANATION

LORAN-C FREQUENCY..... 100kHz  
PULSE REPETITION INTERVAL  
8970..... 89,700 Microseconds  
STATION TYPE DESIGNATORS: (Not individual station letter designators).  
M..... Master  
W..... Secondary  
X..... Secondary  
Y..... Secondary  
Z..... Secondary

EXAMPLE: 8970-Y

### RATES ON THIS CHART

8970-X 8970-Y

Loran-C correction tables published by the National Geospatial-Intelligence Agency or others should not be used with this chart. The lines of position shown have been adjusted based on survey data. Every effort has been made to meet the ¼ nautical mile accuracy criteria established by the U.S. Coast Guard. Mariners are cautioned not to rely solely on the lattices in inshore waters.

## NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 6. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 9th Coast Guard District in Cleveland, Ohio, or at the Office of the District Engineer, Corps of Engineers in St. Paul, Minnesota.  
Refer to charted regulation section numbers.

## NOTE Z

### NO-DISCHARGE ZONE, 40 CFR 140

Michigan waters of Lakes Michigan, Huron, Superior, Erie and St. Clair, all waterways connected thereto, and all inland lakes are designated as a No-Discharge Zone (NDZ). Under the Clean Water Act, Section 312, all vessels operating within a No-Discharge Zone (NDZ) are completely prohibited from discharging any sewage, treated or untreated, into the waters. Commercial vessel sewage shall include graywater. All vessels with an installed marine sanitation device (MSD) that are navigating, moored, anchored, or docked within a NDZ must have the MSD disabled to prevent the overboard discharge of sewage (treated or untreated) or install a holding tank. Regulations for the NDZ are contained in the U.S. Coast Pilot. Additional information concerning the regulations and requirements may be obtained from the Environmental Protection Agency (EPA) web site: [http://www.epa.gov/owow/oceans/vessel\\_sewage/](http://www.epa.gov/owow/oceans/vessel_sewage/).

## CAUTION

### POTABLE WATER INTAKE (PWI)

Vessels operating in fresh water lakes or rivers shall not discharge sewage, or ballast, or bilge water within such areas adjacent to domestic water intakes as are designated by the Commissioner of Food and Drugs (21 CFR 1250.93). Consult U. S. Coast Pilot 6 for important supplemental information.

## SOURCE DIAGRAM

Most of the hydrography identified by the letter "I" was surveyed by the U.S. Army Corps of Engineers prior to 1974. Other outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels currently maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

Sailing courses and limits indicated in magenta are recommended by the Lake Carriers Association and the Canadian Shipowners Association.

## WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot 6 for details.

SYMBOLS AND ABBREVIATIONS. For complete list of symbols and abbreviations see Chart No. 1.

AIDS TO NAVIGATION. Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation. See Canadian List of Lights, Buoys and Fog Signals for information not included in the U.S. Coast Guard Light List.

SAILING DERECTIONS. Bearings of sailing courses are true and distances given thereon are in statute miles between points of departure.

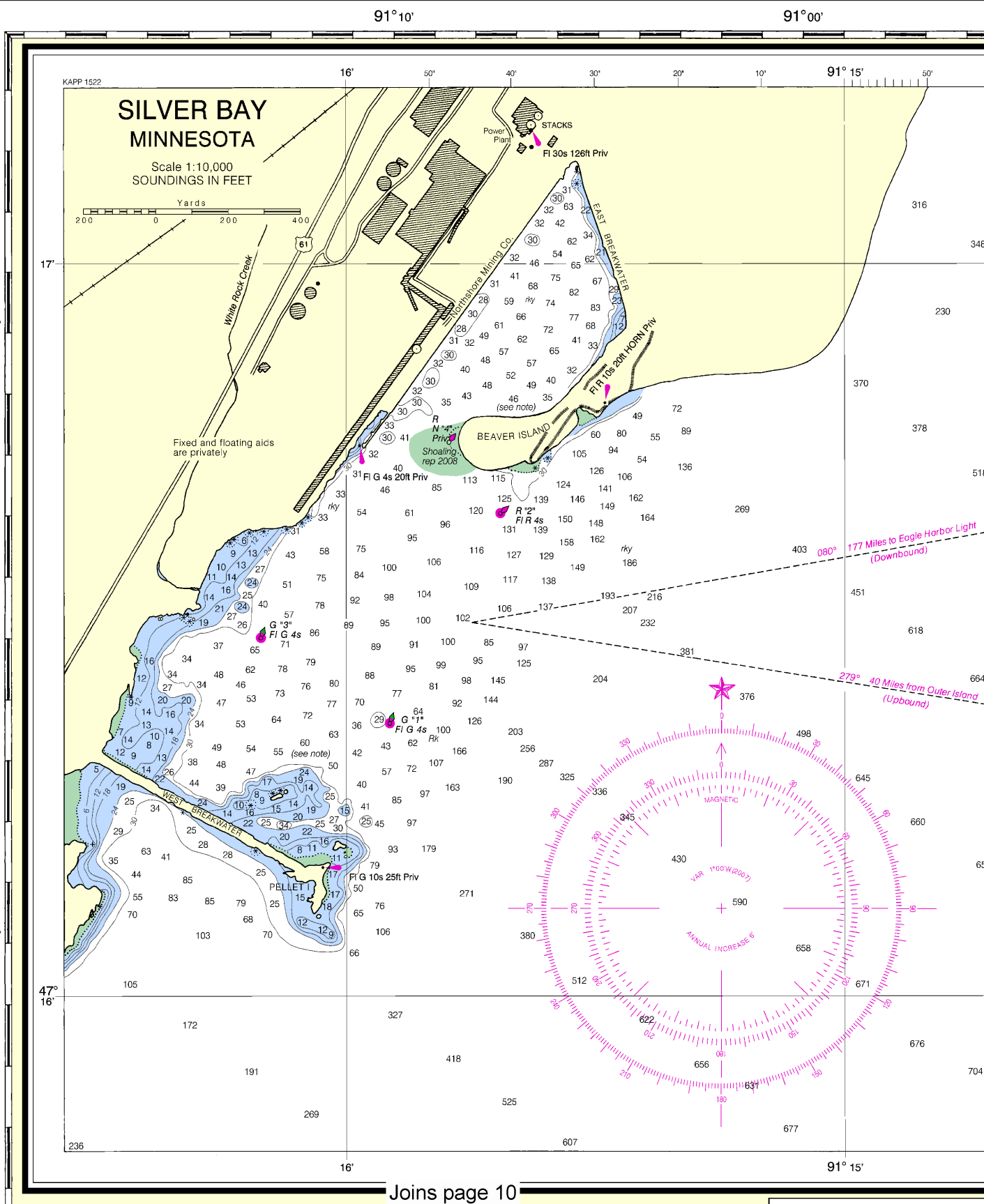
AUTHORITIES. Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, U.S. Coast Guard, and Canadian authorities.

BRIDGE AND OVERHEAD CABLE CLEARANCES. When the water surface is above Low Water Datum, bridge and overhead clearances are reduced correspondingly. For clearances see U.S. Coast Pilot 6.

PLANE OF REFERENCE OF THIS CHART (Low Water Datum) . . . . . 601.1 ft.  
Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985)



LORAN-C OVERPRINTED



4

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

YARDS

STATUTE MILES

See Note on page 5.

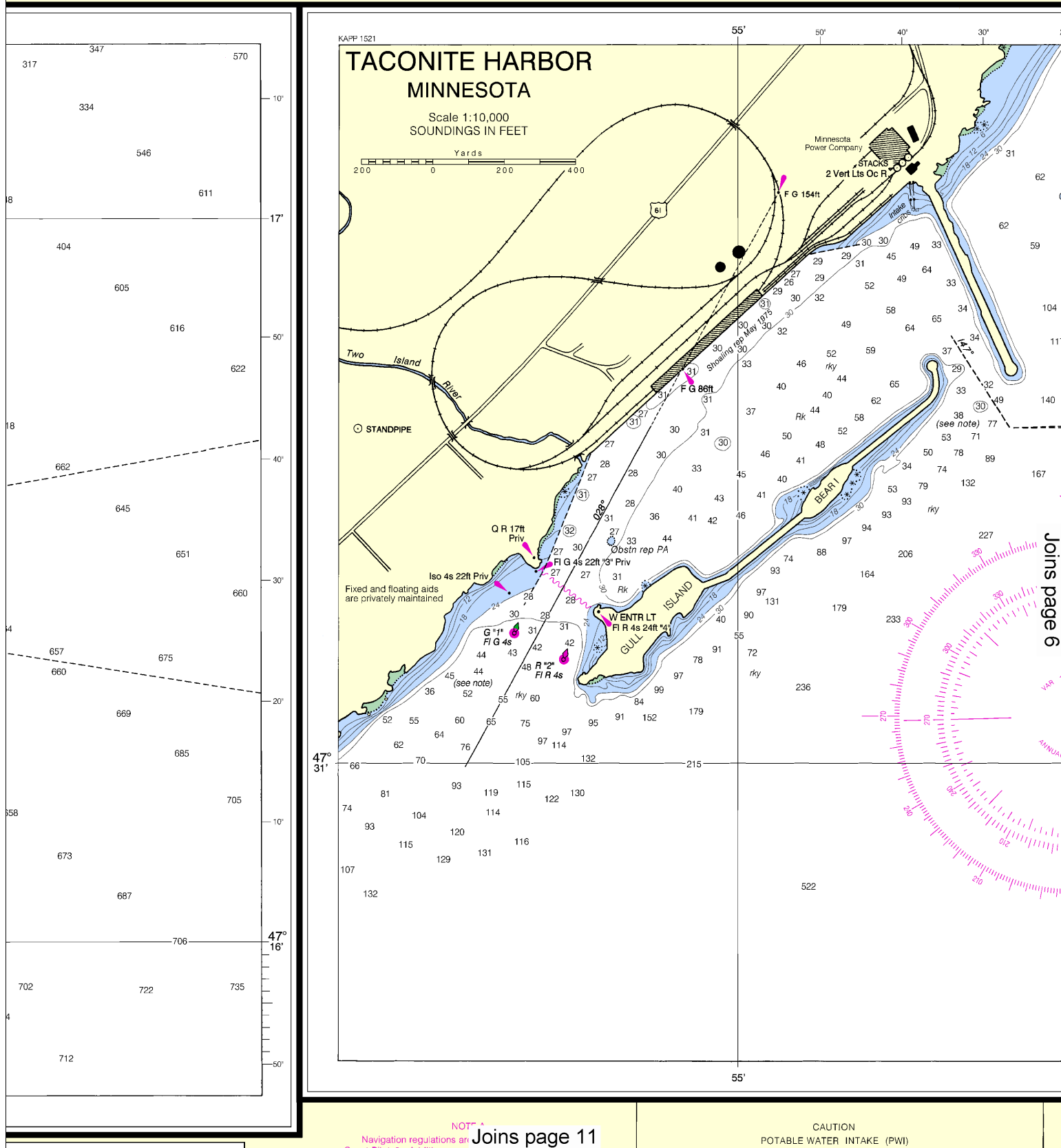
Age Group	Number of people
13-17	10000
18-24	12000
25-34	11000
35-44	10000
45-54	9000
55-64	8000
65-74	9000
75-84	7000
85+	6000

STATUTE MILES

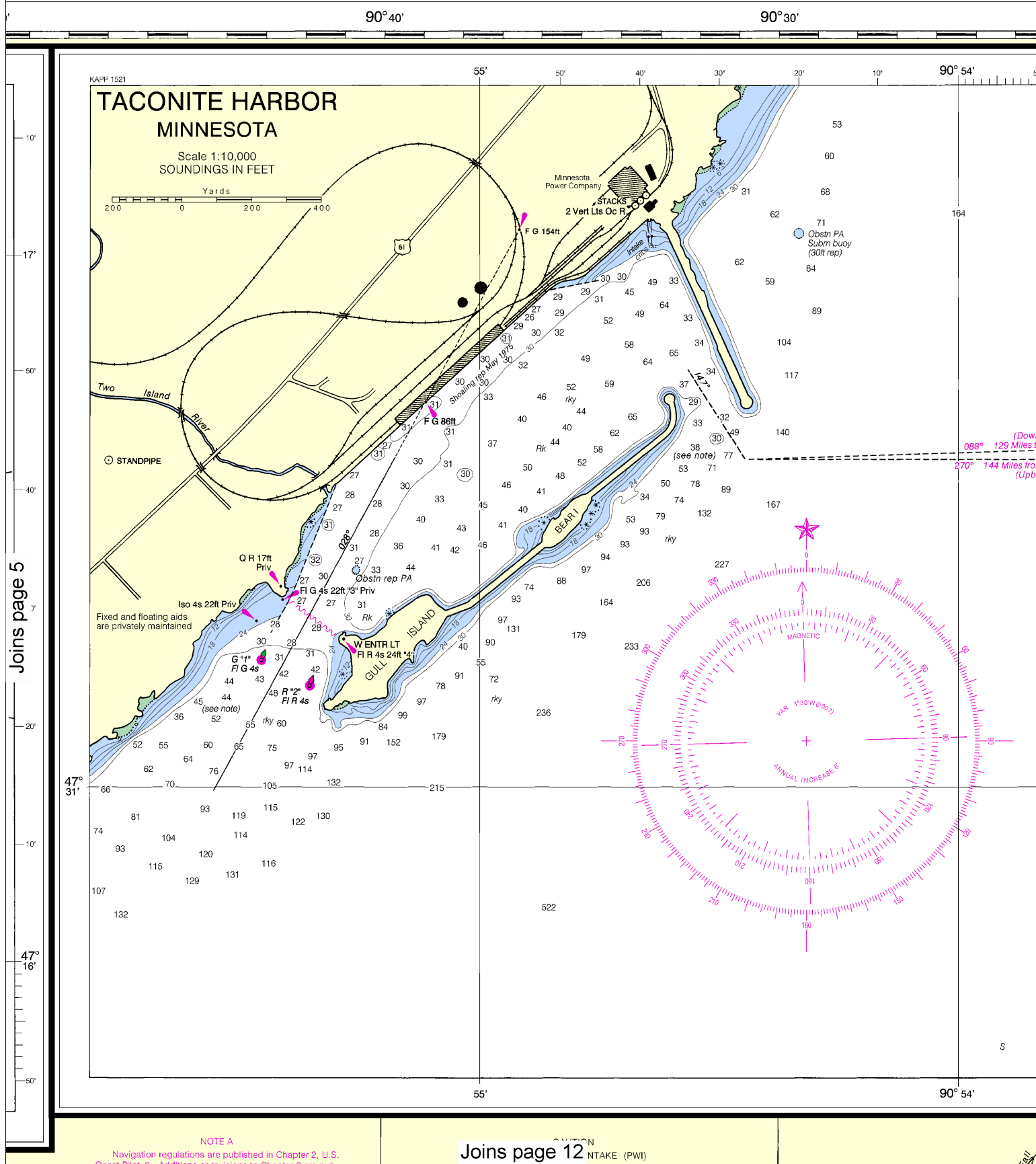
90°50'

90°40'

90°30'



This BookletChart was reduced to 75% of the original chart scale.  
The new scale is 1:160000. Barscales have also been reduced and  
are accurate when used to measure distances in this BookletChart.



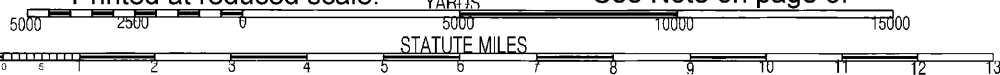
Joins page 5

Joins page 12

6

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.



See Note on page 5.

90°20'

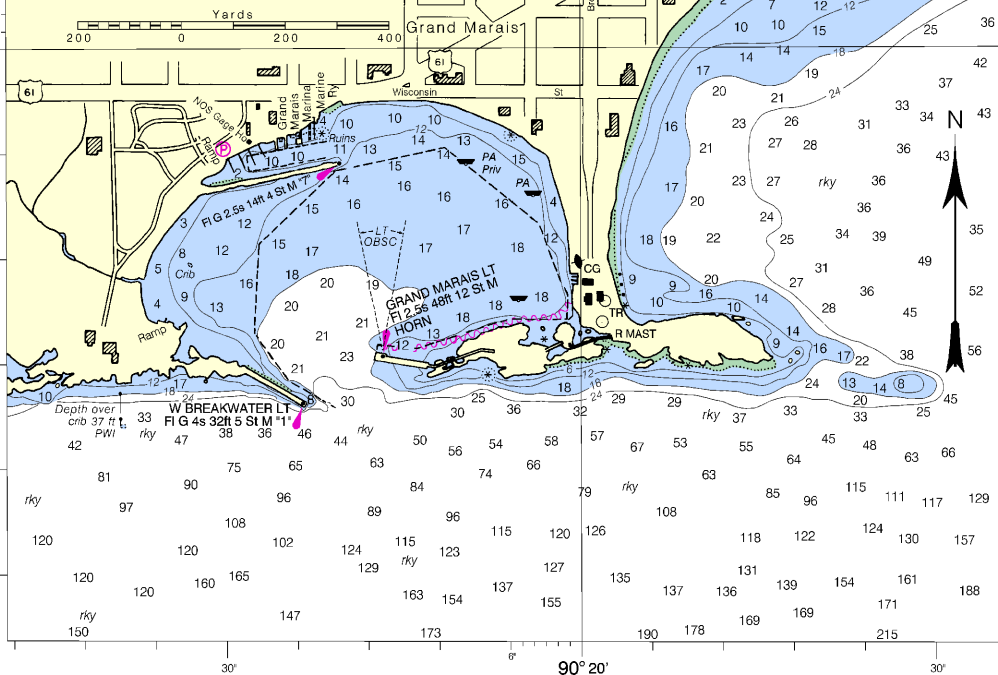
90°10'

90°00'

KAPP 1523

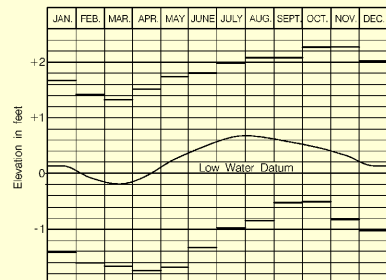
# GRAND MARAIS HARBOR MINNESOTA

Scale 1:10,000  
SOUNDINGS IN FEET



unbound)  
to Eagle Harbor Light  
om Eagle Harbor Light  
bound)

## LAKE SUPERIOR



Low Water Datum, which is the plane of reference for the levels shown on the above hydrograph, is also the plane of reference for the charted depths. If the lake level is above or below Low Water Datum, the existing depths are correspondingly greater or lesser than the charted depths.

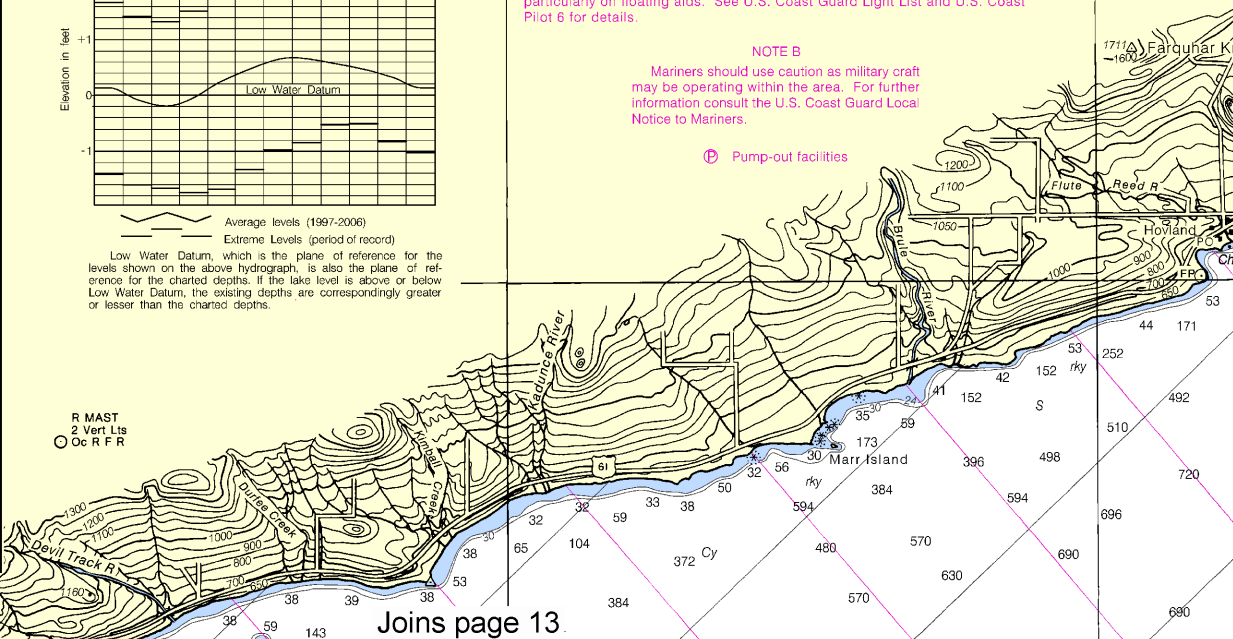
Sailing courses and limits indicated in magenta are recommended by the Lake Carriers Association and the Canadian Shipowners Association.

**WARNING**  
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**NOTE B**  
Mariners should use caution as military craft may be operating within the area. For further information consult the U.S. Coast Guard Local Notice to Mariners.

Pump-out facilities

R MAST  
2 Vert Lts  
Oc R 2 F R



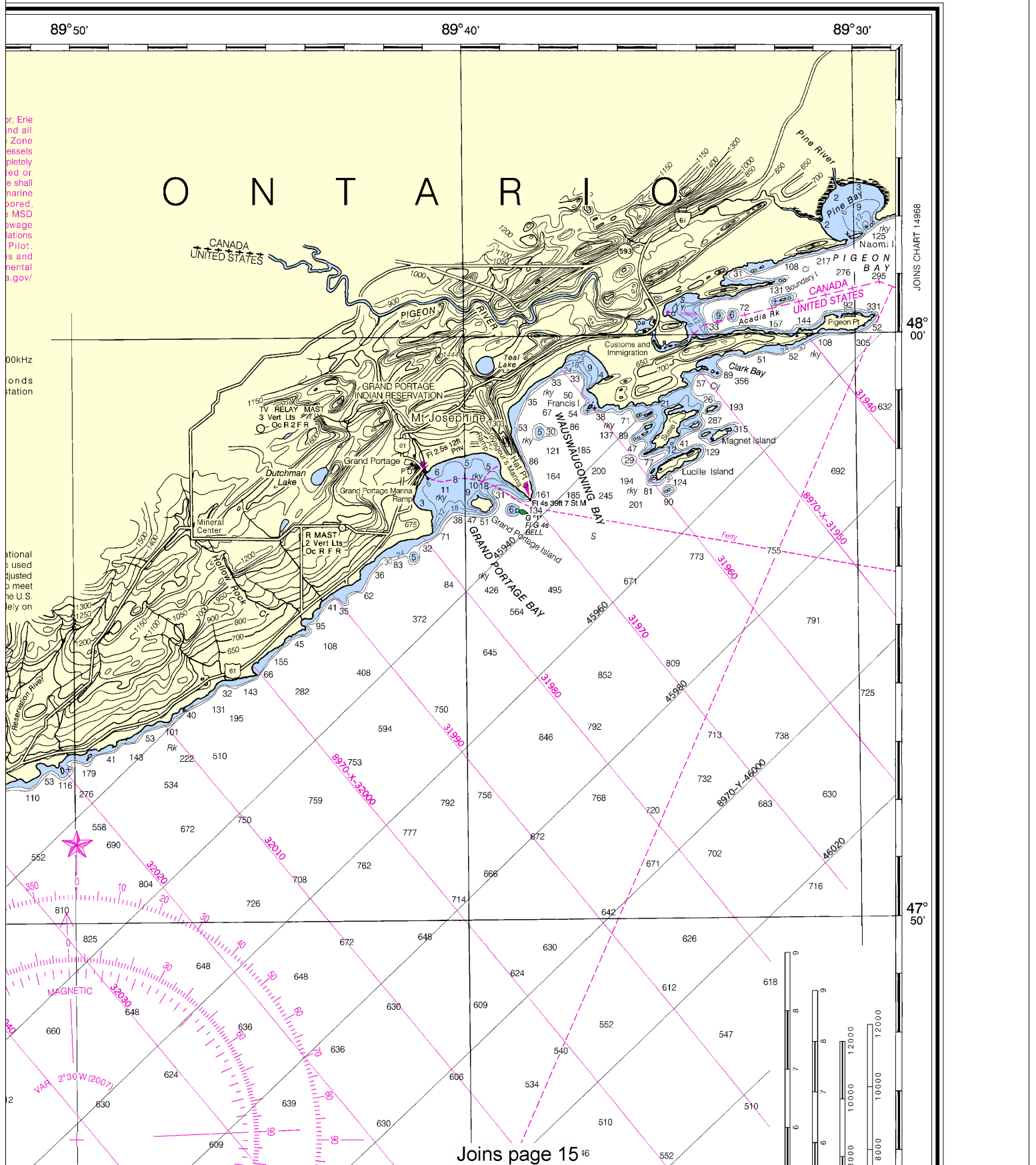
Joins page 13

Joins page 8





# SOUNDINGS IN FEET



191

269

525

607

677

656

634

676

704

16'

91° 15'



THE NATION'S CHARTMAKER SINCE 1807

UNITED STATES - GREAT LAKES  
LAKE SUPERIOR - MINNESOTA

# BEAVER BAY TO PIGEON POINT

Polyconic Projection  
Scale 1:120,000

North American Datum of 1983  
(World Geodetic System 1984)

## SOUNDINGS IN FEET

Additional information can be obtained at [nauticalcharts.noaa.gov](http://nauticalcharts.noaa.gov).

### NOTES

PLANE OF REFERENCE OF THIS CHART (Low Water Datum) . . . . . 601.1 ft.  
Referred to mean water level at Rimouski, Quebec, International Great Lakes Datum (1985)  
SAILING DIRECTIONS. Bearings of sailing courses are true and distances given thereon are in statute miles between points of departure.  
AIDS TO NAVIGATION. Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation. See Canadian List of Lights, Buoys and Fog Signals for information not included in the U.S. Coast Guard Light List.  
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AUTHORITIES. Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, U.S. Coast Guard, and Canadian authorities.

### SUPPLEMENTAL INFORMATION

Consult U.S. Coast Pilot 6 for important supplemental information.

### COPYRIGHT

No copyright is claimed by the United States Government under Title 17 U.S.C. However, other nations may claim intellectual property rights on the compilation of data depicting the foreign waters shown on this chart.

### CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

### CAUTION

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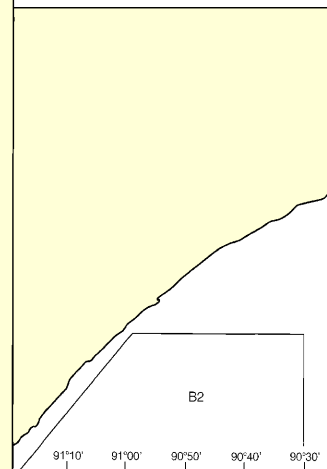
### POLLUTION REPORTS

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CAUTION

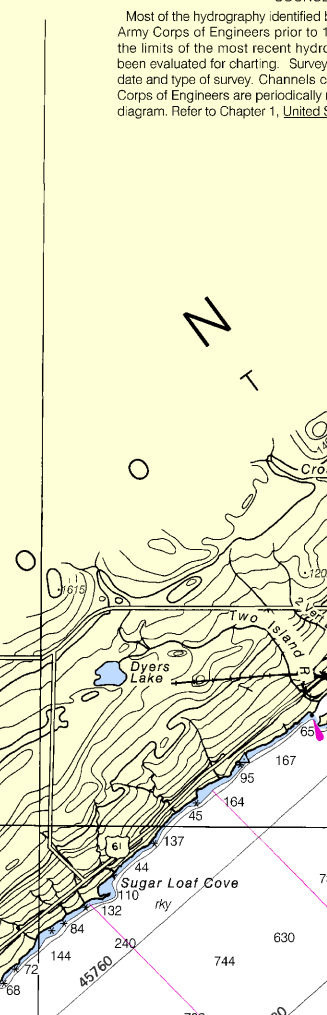
Joins page 16

B2	1970-1989	SON
g		NOS Sur
j	Pre-1974	Canada
		Lake Sur



### SOURCE

Most of the hydrography identified by the Army Corps of Engineers prior to 1970 is the limits of the most recent hydrographic survey. Survey date and type of survey. Channels of the Corps of Engineers are periodically updated. Refer to Chapter 1, United States Coast Survey.



# 10

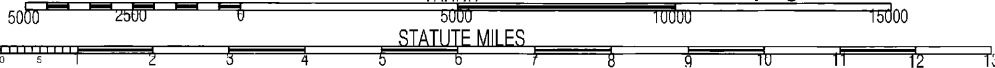
Note: Chart grid lines are aligned with true north.

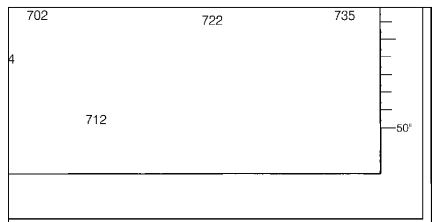
Printed at reduced scale.

YARDS

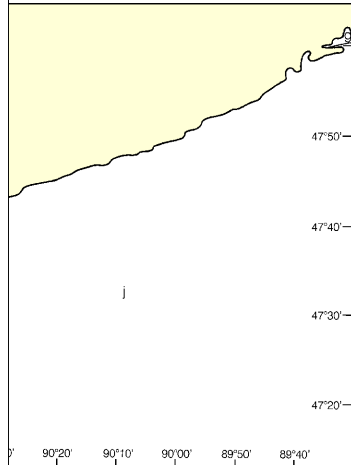
See Note on page 5.

STATUTE MILES





**SOURCE**  
 Surveys partial bottom coverage  
 Tidal Surveys partial bottom coverage  
 Survey Surveys partial bottom coverage

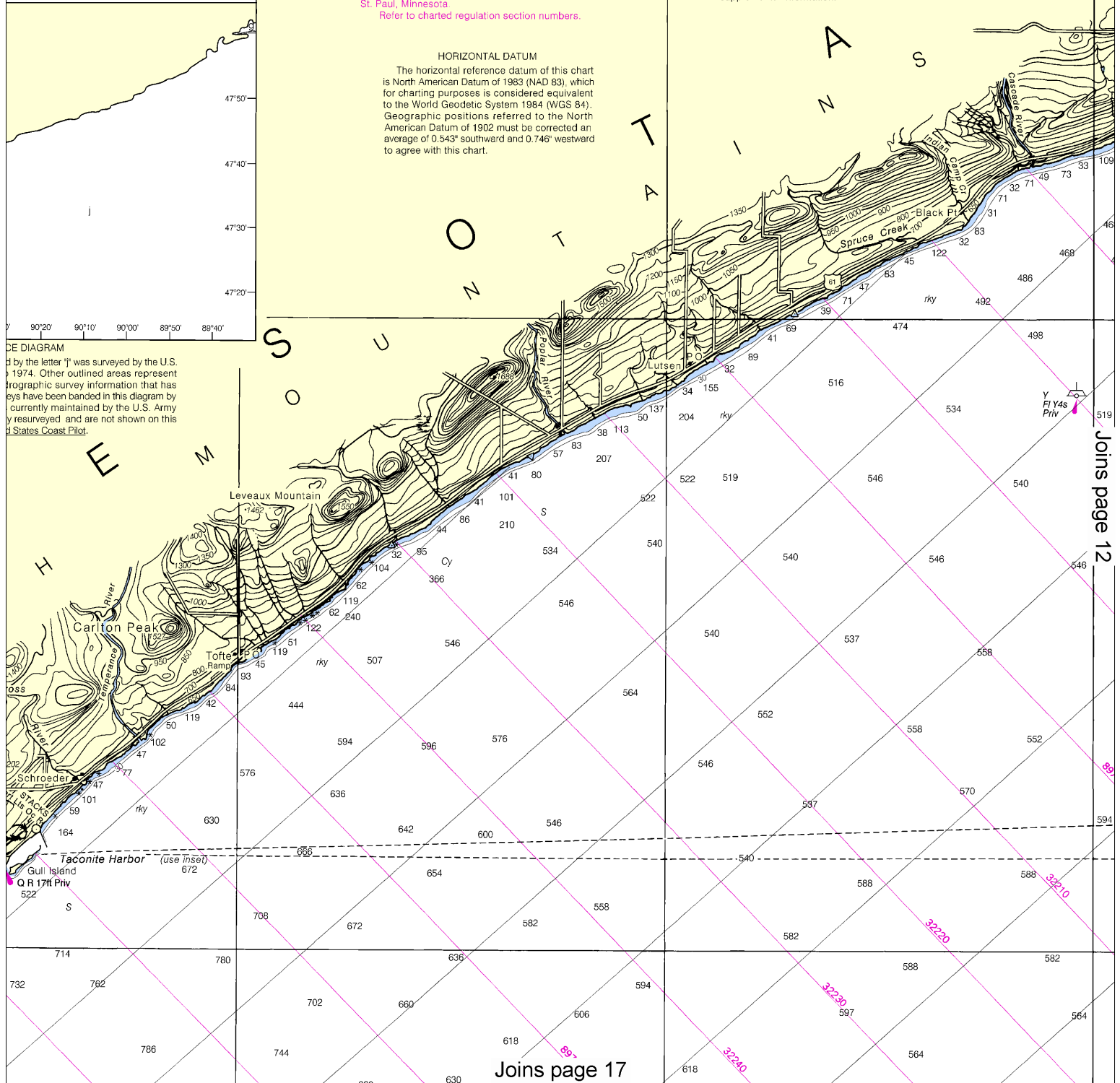


**CE DIAGRAM**  
 The area enclosed by the letter "J" was surveyed by the U.S. Coast and Geodetic Survey in 1974. Other outlined areas represent hydrographic survey information that has been maintained by the U.S. Army Corps of Engineers and are not shown on this chart. See U.S. Coast Pilot 6 for more information.

**NOTE A**  
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**HORIZONTAL DATUM**  
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**CAUTION**  
**POTABLE WATER INTAKE (PWI)**  
 Vessels operating in fresh water lakes or rivers shall not discharge sewage, or ballast, or bilge water within such areas adjacent to domestic water intakes as are designated by the Commissioner of Food and Drugs (21 CFR 1250.93). Consult U. S. Coast Pilot 6 for important supplemental information.



**NOTE A**

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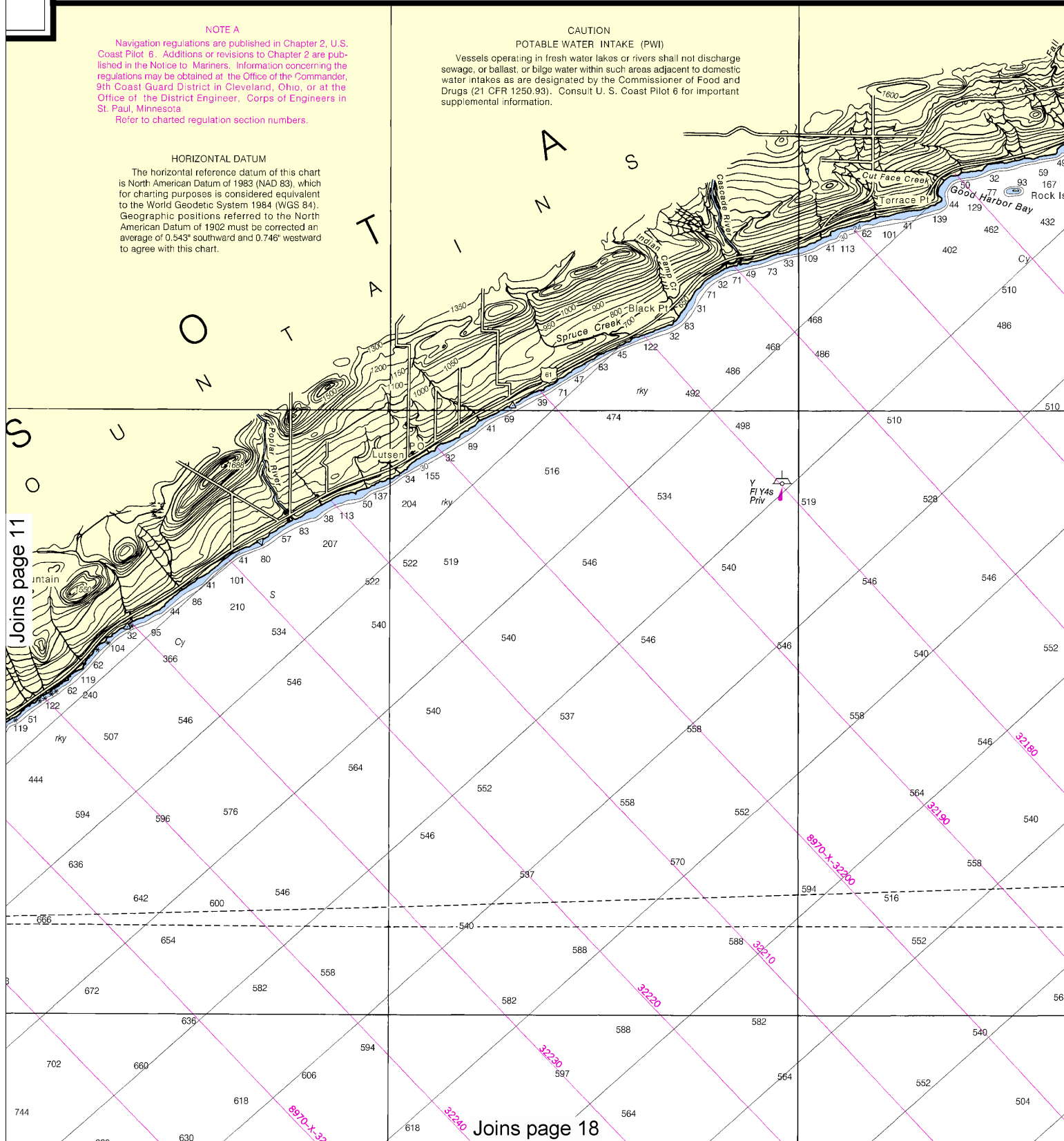
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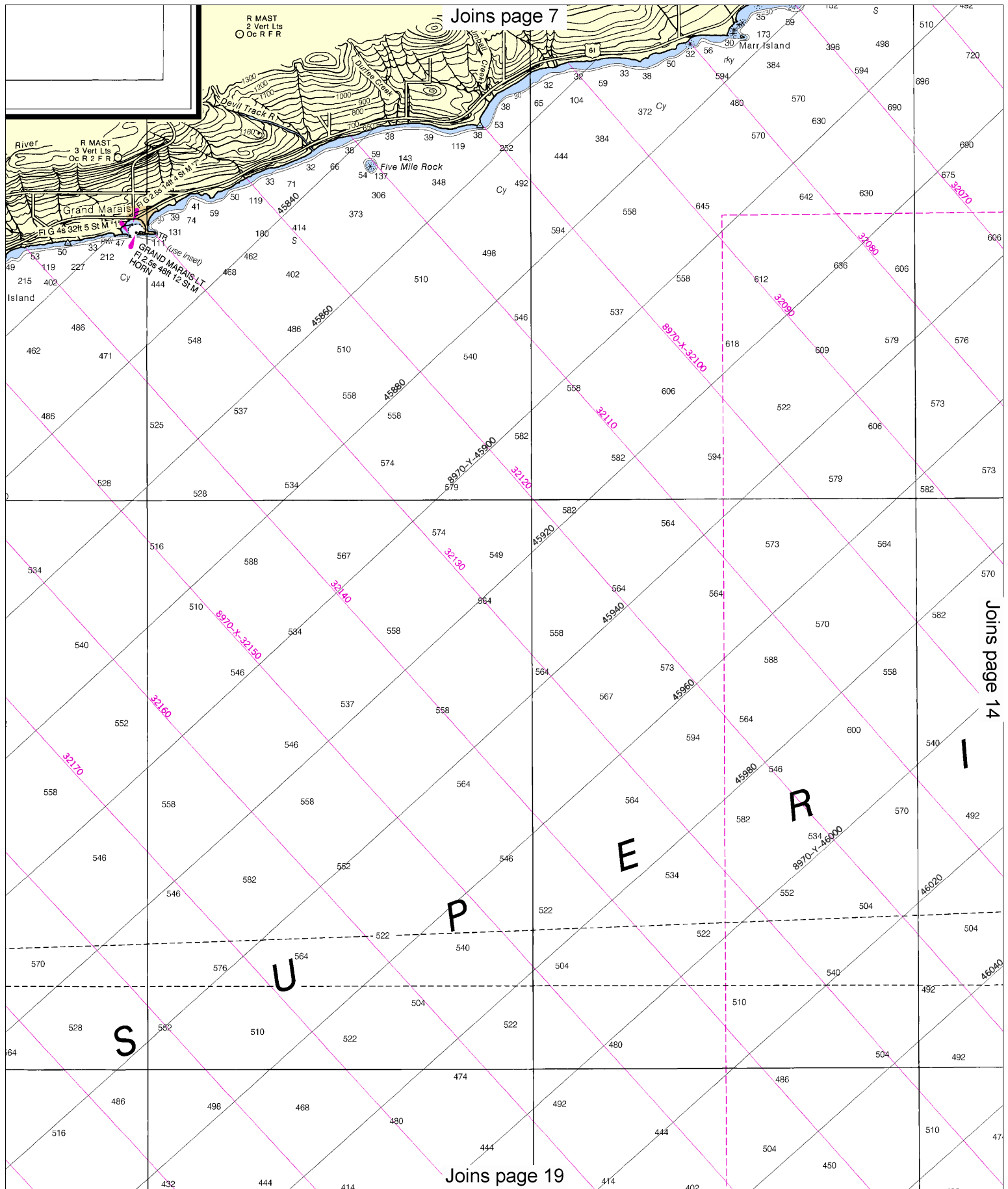
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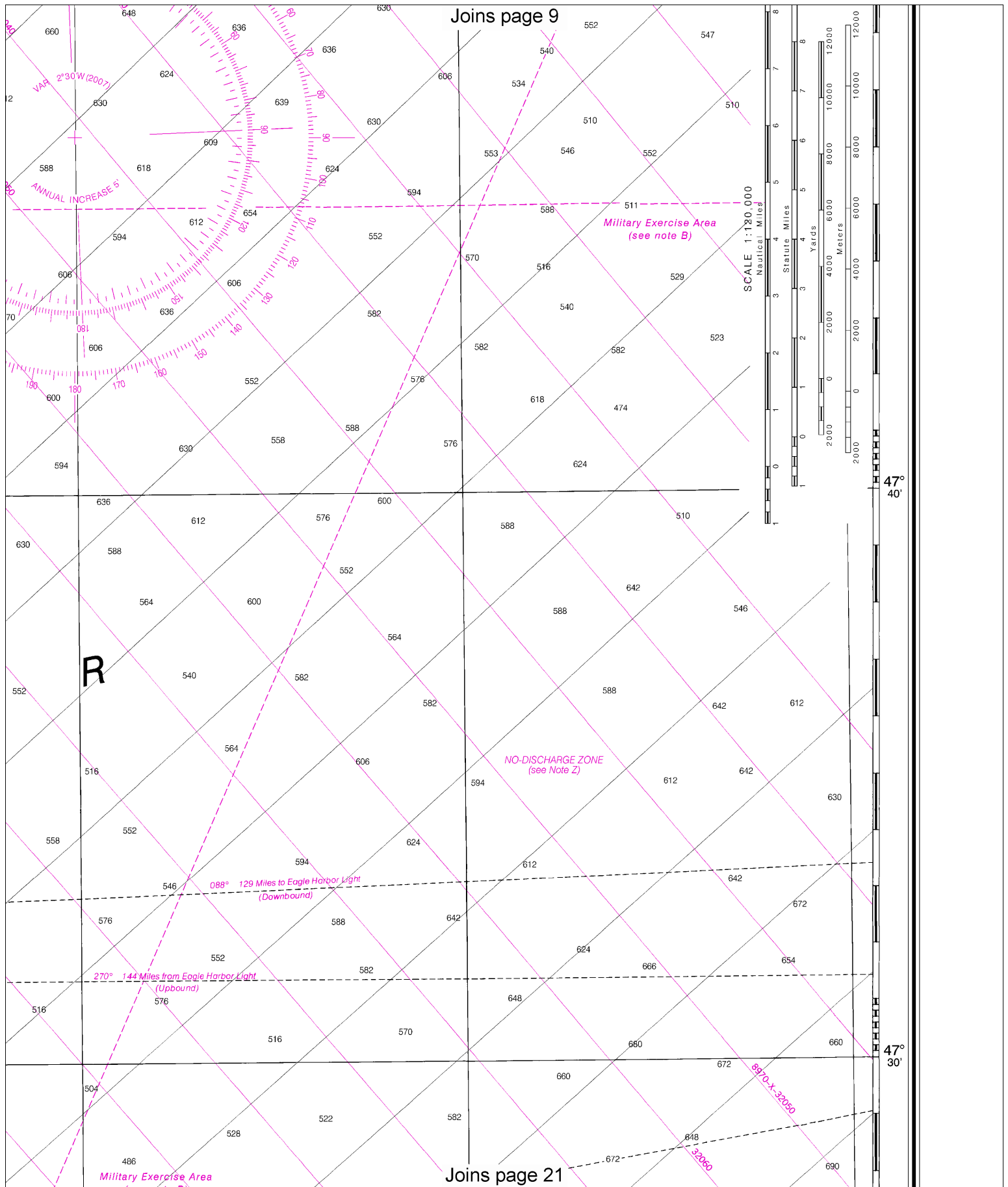
Joins page 11

Joins page 18









47° 30'

47° 20'

### POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

### CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117.

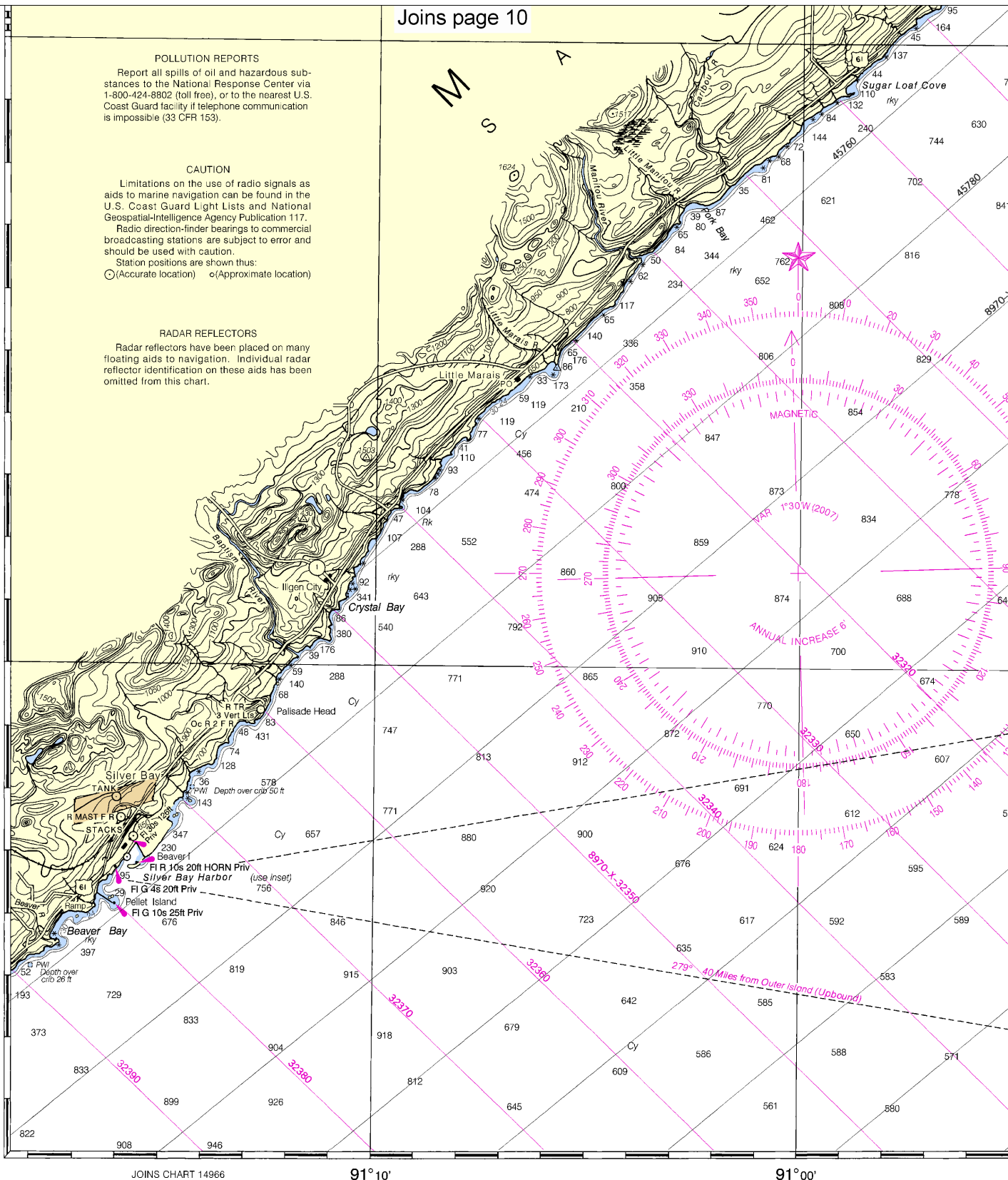
Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:

○ (Accurate location) ○ (Approximate location)

### RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.



JOINS CHART 14966

91° 10'

91° 00'

23rd Ed., Jul. / 07  
**14967**

LORAN-C OVERPRINTED

Corrected through NM Jul. 14/07  
Corrected through LNM Jul. 10/07

### CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at [nauticalcharts.noaa.gov](http://nauticalcharts.noaa.gov).

This nautical chart has been designed to promote safe navigation. The U.S. Coast Guard encourages users to submit corrections, additional information, or comments to the Chief, Marine Chart Division (N/CSD), Service, NOAA, Silver Spring, Maryland 20910-3282.

**16**

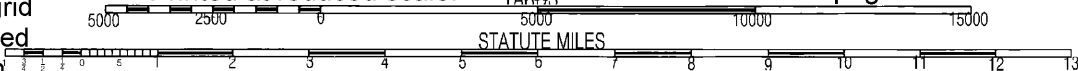
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

YARDS

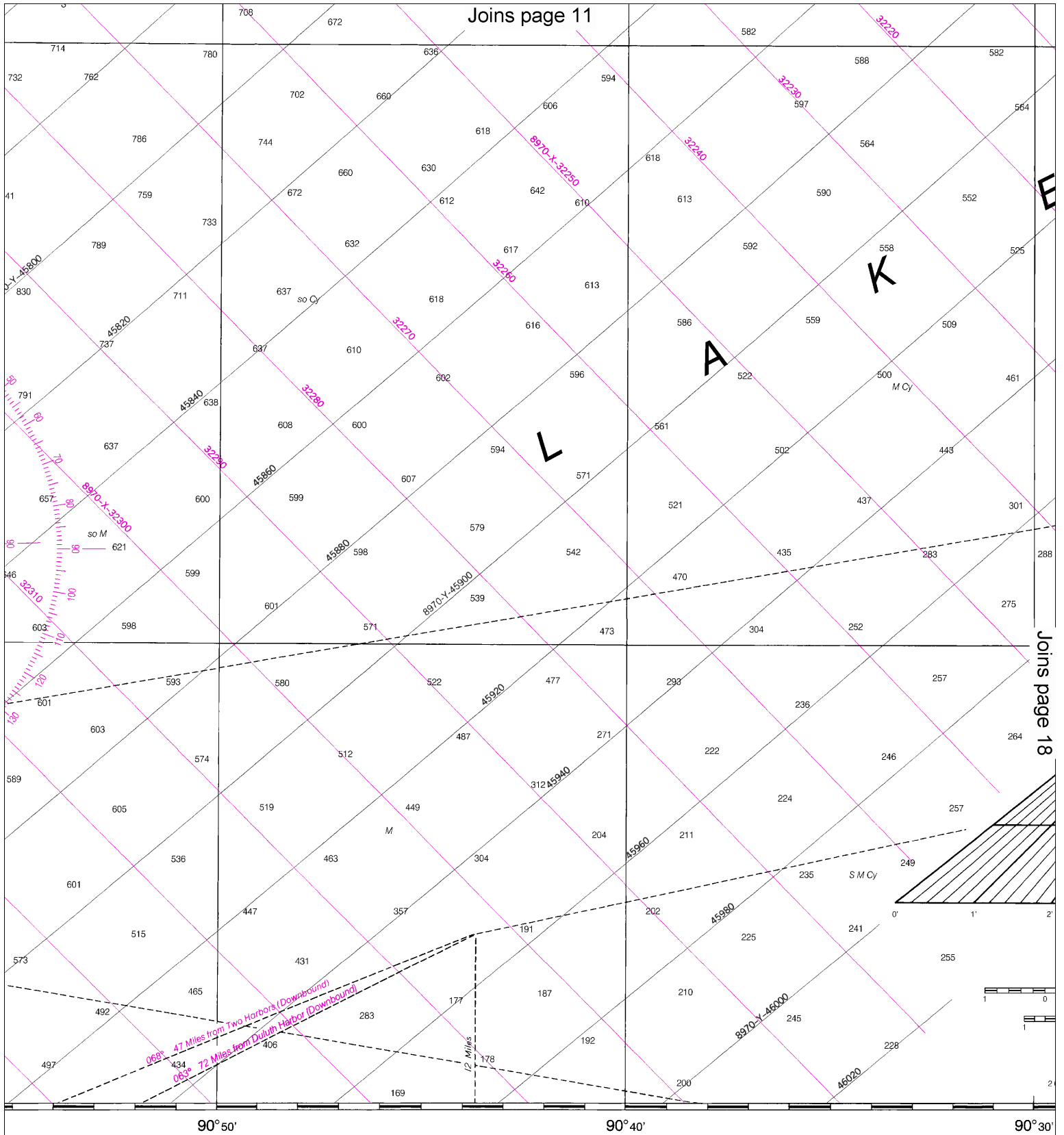
See Note on page 5.

STATUTE MILES





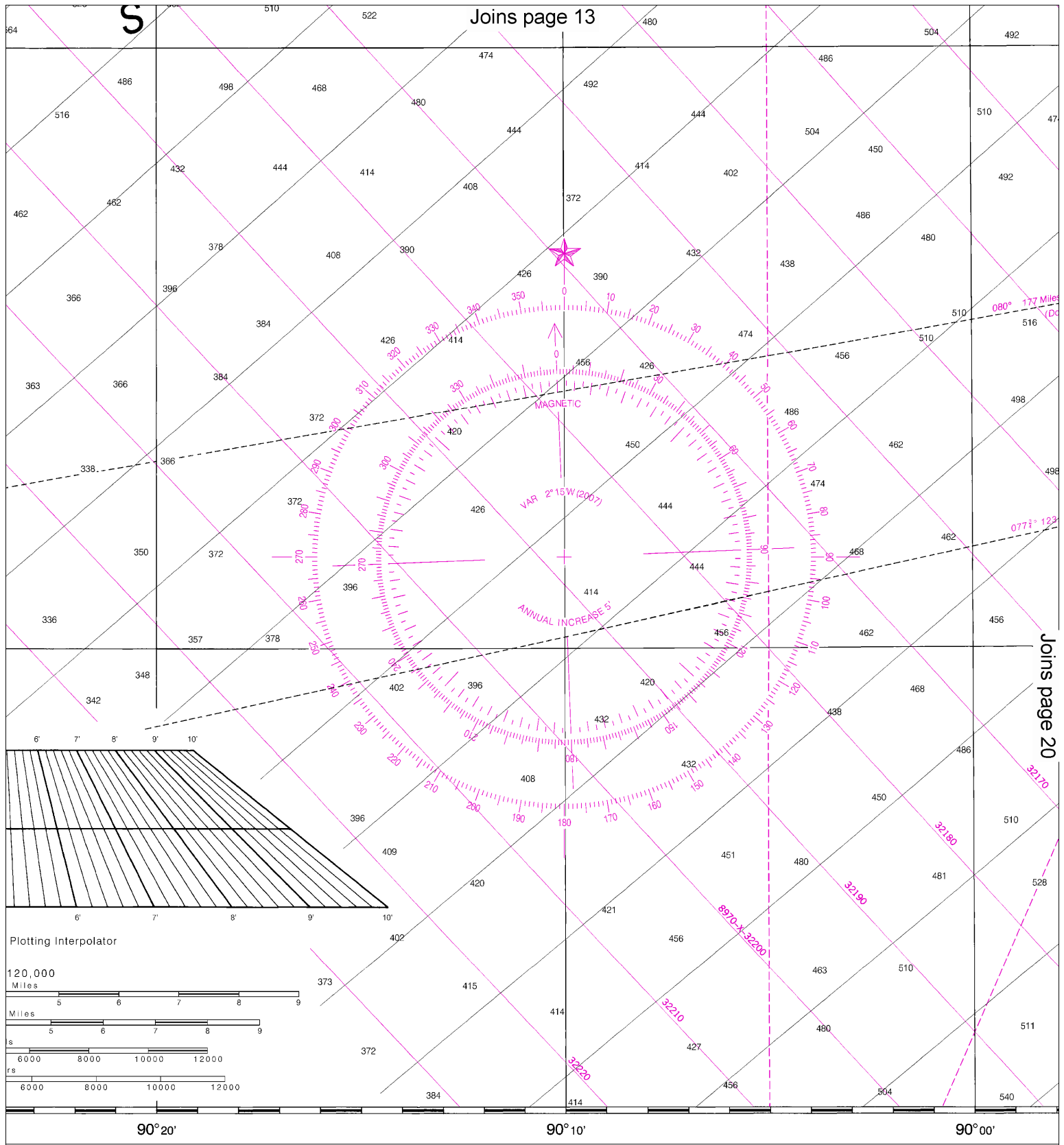
Joins page 11



avigation. The National  
ions, or comments for  
CS2), National Ocean

## SOUNDINGS IN FEET

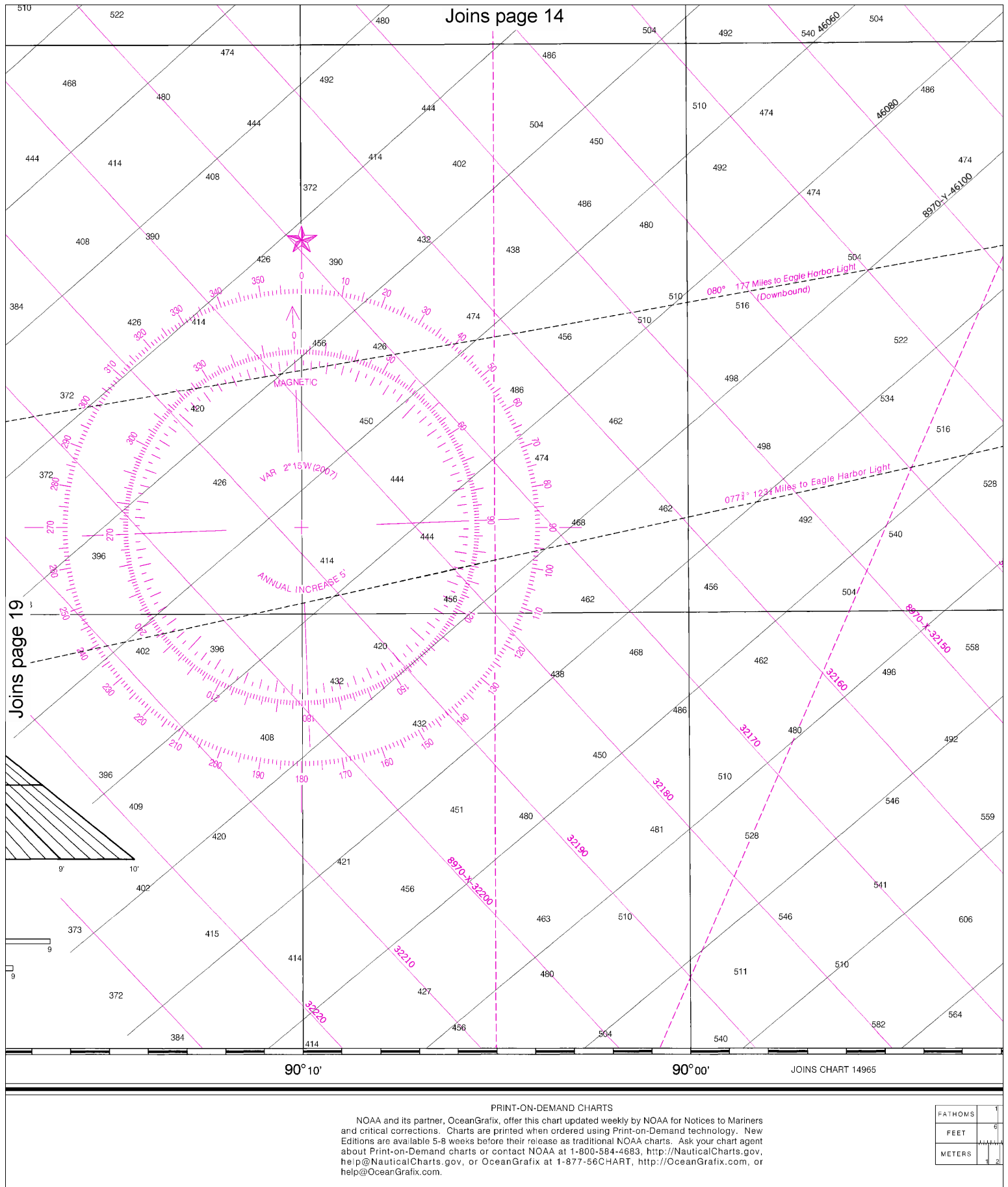




Washington, D.C.  
 DEPARTMENT OF COMMERCE  
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
 U.S. COAST AND GEODETIC SURVEY

#### PRINT-ON-DEMAND CHARTS

NOAA and its partner, OceanGrafix, offer this chart updated weekly by NOAA for Notices to Mariners and critical corrections. Charts are printed when ordered using Print-on-Demand technology. New Editions are available 5-8 weeks before their release as traditional NOAA charts. Ask your chart agent about Print-on-Demand charts or contact NOAA at 1-800-584-4683, <http://NauticalCharts.gov>, [help@NauticalCharts.gov](mailto:help@NauticalCharts.gov), or OceanGrafix at 1-877-56CHART, <http://OceanGrafix.com>, or [help@OceanGrafix.com](mailto:help@OceanGrafix.com).



**20**

Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

YARDS

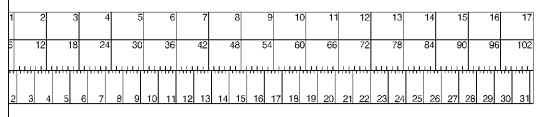
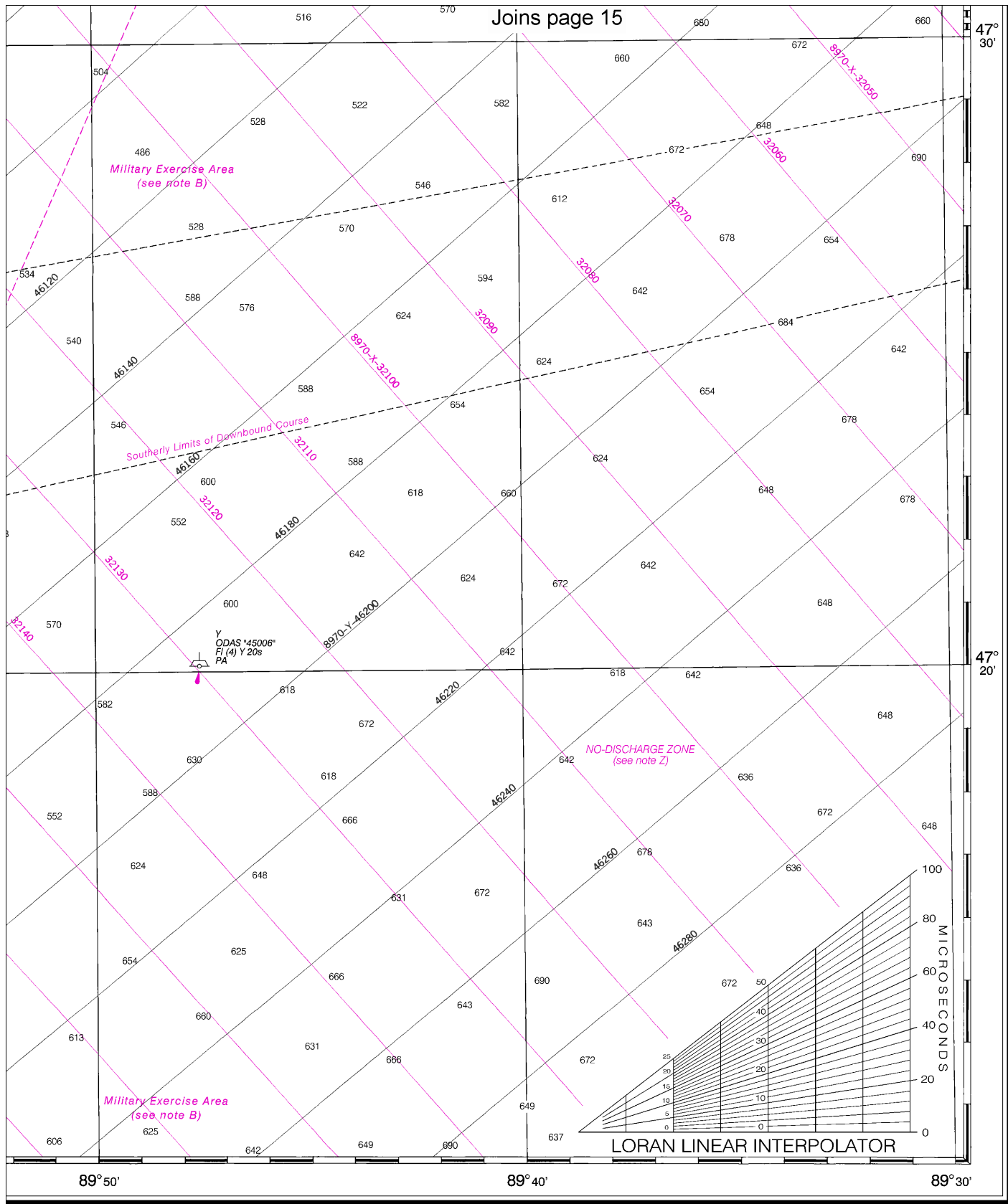
See Note on page 5.

5000 2500 0 5000 10000 15000

STATUTE MILES

1 2 3 4 5 6 7 8 9 10 11 12 13





Beaver Bay to Pigeon Point  
SOUNDINGS IN FEET - SCALE 1:120,000

**14967**  
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NGA REFERENCE NO. 14XC014967



## VHF Marine Radio channels for use on the waterways:

**Channel 6** – Inter-ship safety communications.

**Channel 9** – Communications between boats and ship-to-coast.

**Channel 13** – Navigation purposes at bridges, locks, and harbors.

**Channel 16** – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other

vessels. Contact the other vessel, agree to another channel, and then switch.

**Channel 22A** – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

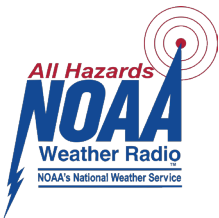
**Channels 68, 69, 71, 72 and 78A** – Recreational boat channels.

**Getting and Giving Help** — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

## Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

**HAVE ALL PERSONS PUT ON LIFE JACKETS!**



**NOAA Weather Radio All Hazards (NWR)** is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.

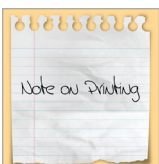
<http://www.nws.noaa.gov/nwr/>

## Quick References

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Report a chart discrepancy	—	<a href="http://ocsddata.ncd.noaa.gov/idrs/discrepancy.aspx">http://ocsddata.ncd.noaa.gov/idrs/discrepancy.aspx</a>
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National Data Buoy Center	—	<a href="http://www.ndbc.noaa.gov/">http://www.ndbc.noaa.gov/</a>
NowCoast web portal for coastal conditions	—	<a href="http://www.nowcoast.noaa.gov/">http://www.nowcoast.noaa.gov/</a>
National Weather Service	—	<a href="http://www.weather.gov/">http://www.weather.gov/</a>
National Hurricane Center	—	<a href="http://www.nhc.noaa.gov/">http://www.nhc.noaa.gov/</a>
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NOAA's Office of Coast Survey



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